University of Stuttgart's
TIK – (IT-Service provider)

Dr.-Ing. Dr.
Alexey Cheptsov

Allmandring 30a
70569 Stuttgart
Germany
+49 711 68560470
alexey.cheptsov@tik.uni-stuttgart.de

General Information

Alexey Cheptsov is heading the Data Center and Cloud Technology department at TIK[1] – the university of Stuttgart's IT-Service provider. The TIK's Data Center hosts a storage environment consisting of a range of storage facilities (performance- and capacity-oriented storage systems from NetApp and IBM) for holding and maintaining data on different scale, performance, and duration, as well as a private-Cloud computing environment for parallel and distributed applications and workflows. Previously Alexey Cheptsov has been working for a decade as a researcher at HLRS – the High Performance Computing Center Stuttgart.

Data analytics, including such topic as Big Data and Smart Data, is an essential research direction with which Alexey Cheptsov has been dealing since his affiliation at HLRS. The importance of supercomputing support for data-centric application workflows was recognised with the emergence of the Big Data hive at the research horizon in about 2010. Alexey was working in the direction of enabling a very promising HPC technology – Message Passing Interface (MPI) – to data analytics application. One of the first results in this work direction was published at the **IARIA's SEMAPRO conference** in 2012 (A. Cheptsov: Enabling High Performance Computing for Semantic Web Applications by Means of Open MPI Java Bindings). This work was distinguished with a Best Paper award. The research results described in the paper had paved the way to a promising technology of Java applications support by supercomputers, taken up by numerous research, innovation, and industrial projects in the EU and internationally. In 2013, Alexey in cooperation with Axel Tenschert presented an implementation of a challenging Semantic Web use case – Statistical Semantic Spaces analysis – with the previously elaborated technology. This publication won the Best Paper Award at the **IARIA's SEMAPRO conference** in 2013 (A. Cheptsov, A. Tenschert: Parallel Search Through Statistical Semantic Spaces for Querying Big RDF Data Proceedings of the Seventh International Conference on Advances in Semantic Processing, pp. 1-6).

Since 2015 Alexey Cheptsov has joined the IARIA family as an **IARIA fellow**.

Stuttgart, 05/2025

---

[1] TIK – (in German) *die Technischen Kommunikations- und Informationsdienste*